

ABSTRACT OF THE DISCLOSURE

A method for forming complexly shaped composite laminate assemblies. A pair of dry fiber preforms are placed on a tool with a thin film adhesive layer therebetween. A vacuum bag encloses the preforms and the adhesive layer. The preforms are heated to a temperature sufficient to cause the adhesive to become viscous and to wet several plies of each of the preforms. The preforms are then allowed to cool slightly before resin is infused via a vacuum source through each of the preforms to thoroughly wet each of the preforms. The resulting joint formed at the bond line of the two preforms is stronger than what would be formed simply by adhering two otherwise completely formed preforms together because the dry fiber preforms, in connection with the heating of the preforms, allow wetting of several plies of each of the preforms at the joint area, rather than just the surface ply of each preform.